AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. A purified antibody, or fragment thereof, which specifically binds to a fibroblast growth factor receptor (FGFR)-1(IIIb), FGFR-1(IIIc), or FGFR-4(IIIc).

2. The antibody of claim 1, wherein the antibody, or fragment thereof, binds to an extracellular domain of fibroblast growth factor receptor FGFR-1(IIIb), FGFR-1(IIIc), or FGFR-4(IIIc) and neutralizes activation of the receptor.

3. The antibody of claim 1, wherein the antibody, or fragment thereof, inhibits binding of a ligand of FGFR-1(IIIb), FGFR-1(IIIc), or FGFR-4(IIIc) to its receptor.

4. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6.

5. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least 70% homology to SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6.

6. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least about 80% homology to SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6.

7. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least about 90% homology to SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6.

8. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody comprises a sequence selected from the group consisting of SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, and SEQ ID NO:14.

9. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least 70% homology to

SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, and SEQ ID NO:14.

10. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least about 80% homology to SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, and SEQ ID NO:14.

11. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least about 90% homology to SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, and SEQ ID NO:14.

12. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody comprises a sequence selected from the group consisting of SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, and SEQ ID NO:22.

13. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least 70% homology to SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, and SEQ ID NO:22.

14. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least about 80% homology to SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, and SEQ ID NO:22.

15. The antibody of claim 1, wherein at least one complementarity-determining region (CDR) of the antibody, or fragment thereof, comprises a sequence with at least about 90% homology to SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, and SEQ ID NO:22.

16. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence of SEQ ID NO:7 or a light chain variable region sequence of SEQ ID NO:8.

17. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 70% homology to SEQ ID NO:7 or a light chain variable region sequence with at least about 70% homology to SEQ ID NO:8.

18. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 80% homology to SEQ ID NO:7 or a light chain variable region sequence with at least about 80% homology to SEQ ID NO:8.

19. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 90% homology to SEQ ID NO:7 or a light chain variable region sequence with at least about 90% homology to SEQ ID NO:8.

20. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence of SEQ ID NO:15 or a light chain variable region sequence of SEQ ID NO:16.

21. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 70% homology to SEQ ID NO:15 or a light chain variable region sequence with at least about 70% homology to SEQ ID NO:16.

22. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 80% homology to SEQ ID NO:15 or a light chain variable region sequence with at least about 80% homology to SEQ ID NO:16.

23. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 90% homology to SEQ ID NO:15 or a light chain variable region sequence with at least about 90% homology to SEQ ID NO:16.

24. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence of SEQ ID NO:23 or a light chain variable region sequence of SEQ ID NO:24.

25. The antibody claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 70% homology to SEQ ID NO:23 or a light chain variable region sequence with at least about 70% homology to SEQ ID NO:24.

26. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 80% homology to SEQ ID NO:23 or a light chain variable region sequence with at least about 80% homology to SEQ ID NO:24.

27. The antibody of claim 1, wherein the antibody comprises a heavy chain variable region sequence with at least about 90% homology to SEQ ID NO:23 or a light chain variable region sequence with at least about 90% homology to SEQ ID NO:24.

28. An isolated nucleic acid encoding an antibody, or fragment thereof, which specifically binds to a fibroblast growth factor receptor (FGFR)-1(IIIb), FGFR-1(IIIc), or FGFR-4(IIIc).

29. An expression vector comprising a nucleic acid encoding an antibody, or fragment thereof, which specifically binds to a fibroblast growth factor receptor (FGFR)-1(IIIb), FGFR-1(IIIc), or FGFR-4(IIIc), said nucleic acid operably linked to a control sequence.

30. A host cell comprising an expression vector, said expression vector comprising a nucleic acid encoding an antibody, or fragment thereof, which specifically binds to a fibroblast growth factor receptor (FGFR)-1(IIIb), FGFR-1(IIIc), or FGFR-4(IIIc), said nucleic acid operably linked to a control sequence.

31. A method of producing an antibody comprising culturing the host cell of claim 30 under conditions permitting expression of the antibody.

32. The method of claim 31, wherein the method further comprises purifying the antibody.

33. A pharmaceutical composition comprising the antibody of claim 1 and a pharmaceutically acceptable carrier.

34. A method of identifying a fibroblast growth factor receptor (FGFR)-1(IIIb), FGFR-1(IIIc), or FGFR-4(IIIc) specific antibody, or fragment thereof, comprising:

providing a library of antibody fragments,

screening the library for the antibody that is specific for FGFR-1(IIIb) and/or FGFR-1(IIIc) or the antibody specific for FGFR-1(IIIc) and/or FGFR-4, and

purifying the antibody that is specific for FGFR-1(IIIb) and/or FGFR-1(IIIc) or the antibody specific for FGFR-1(IIIc) and/or FGFR-4.

35. The method of claim 34, wherein the screening of the library comprises

providing an affinity matrix having the FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4 bound to a solid support,

contacting the affinity matrix with the library of antibody fragments, and

separating the antibody fragments that bind to the affinity matrix from the antibody fragments that do not bind the affinity matrix.

36. An antibody identified using the method of claim 34.

37. A method of treating a condition selected from the group consisting of obesity or an obesity related condition, diabetes or a diabetes related condition, and a condition affected by reducing food intake comprising administering to a mammal in need thereof a therapeutically effective amount of a FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4 antagonist.

38. A method of reducing food intake comprising administering to a mammal in need thereof a therapeutically effective amount of a FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4 antagonist.

39. The method of claim 37, wherein the condition is hypertension.

40. The method of claim 37, wherein the condition is cardiovascular disease.

41. The method of claim 37, wherein said method reduces body mass index.

42. The method of claim 37, wherein said method reduces serum triglycerides.

43. The method of claim 37, wherein said method alters leptin levels.

44. The method of claim 37, wherein said method inhibits angiogenesis.

45. The method of claim 37, wherein said method alters energy metabolism.

46. The method of claim 37, wherein said method alters the Respiratory Exchange Ratio.

47. The method of claim 37, wherein said method has an FGFR-1 or FGFR-4 pathway related anorexic effect.

48. The method of claim 37, wherein the antagonist is a biological molecule.

49. The method of claim 49, wherein the biological molecule is an antibody or fragment thereof.

50. The method of claim 50, wherein the antibody is an antibody of claim 1.

51. The method of claim 37, wherein the antagonist is a small molecule that blocks FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4 signaling.

52. The method of claim 37, wherein the FGFR-1 antagonist binds FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4 internally.

53. The method of claim 37, wherein the FGFR-1 antagonist inhibits FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4 phosphorylation.

54. The method of claim 37, wherein the FGFR-1 antagonist inhibits binding of ATP to FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4.

55. The method of claim 37, wherein the FGFR-1 antagonist competes with ATP for FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4.

56. The method of claim 37, wherein the FGFR-1 antagonist inhibits FGFR-1(IIIb), FGFR-1(IIIc), and/or FGFR-4 tyrosine kinase activity.

57. The method of claim 52, wherein the small molecule comprises pyrimido-pyridine derivative A or B, SU-6668, PD-173074, SU-5402, CHIR-258, or PD-166285.

58. The method of claim 37, wherein the mammal is a human.